

# Rhode Island Pertussis Surveillance Report

Rhode Island Department of Health Immunization Program

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**Pertussis**, or whooping cough, is a highly contagious disease caused by the bacterium *Bordetella pertussis*. Pertussis can occur at any age, but severe illness is more common in young children who have not been immunized. Infants suffer the highest rates of hospital admission and death.

## History of Pertussis Vaccination

Pertussis vaccine has been available in combination with diphtheria and tetanus vaccines (DTP, DTaP) since 1940. DTP (whole cell pertussis) was used until 1991. Today, DTaP (acellular pertussis) vaccine is used exclusively. A series of 5 doses is recommended for children at 2, 4, 6, 12-15 months, and 4-6 years of age. Although most children are protected against pertussis by vaccination, immunity wanes over time (5-10 years) leaving adolescents and adults unprotected. Prior to 2005, there was no pertussis containing vaccine licensed for use in anyone 7 years of age or older. Due to this, the number of reported cases of pertussis in the United States has increased steadily. According to the Centers for Disease Control and Prevention (CDC), in 2004, adults 19–64 years of age accounted for 7,008 (27%) cases and adolescents 11–18 years of age accounted for 8,897 (34%) cases of the total 25,827 pertussis cases reported. In June 2005, the first tetanus, diphtheria, and pertussis containing vaccines (Tdap) were licensed for use in adolescents and adults.

## Tdap Recommendations

Tdap is recommended for:

- Adolescents at 11–12 years of age who have completed the recommended childhood DTP/DTaP vaccination series and have not received a Td booster dose. Adolescents aged 13–18 years who missed the 11–12 year Td/Tdap booster dose should also receive a single dose of Tdap if they have completed the recommended childhood DTP/DTaP vaccination series.
- Adults 19-64 years of age should receive a single dose of Tdap vaccine if they received their last tetanus containing vaccine (e.g., Td)  $\geq$  10 years earlier.

Shorter intervals for adolescent and adult immunization may be considered in settings with increased risks of pertussis. See the recommendations for adolescents and adults in full at [http://www.cdc.gov/nip/recs/provisional\\_rec/default.htm](http://www.cdc.gov/nip/recs/provisional_rec/default.htm)

## Summary of Pertussis Cases in Rhode Island

This report summarizes pertussis cases reported to the Rhode Island Department of Health from January 1 – December 31, 2005. A total of 52 cases of pertussis were reported (no pertussis deaths) during this period, which represents an overall incidence rate of 5.0 per 100,000.

## Reported Cases by Age, 2005

Age	Reported Cases (%)	Incidence* (per 100,000)
< 6 mos	5 (10)	81.9
6-11 mos	1 (2)	16.4
1-4 yrs	1 (2)	1.9
5-9 yrs	7 (13)	9.7
10-19 yrs	21 (40)	14.3
$\geq$ 20 yrs	17 (33)	2.2
<b>Total</b>	<b>52 (100)</b>	<b>5.0</b>

\* Rates are based on 2000 Rhode Island population estimates obtained from the U.S. Bureau of the Census

## Reported Cases by County, 2005

County	Reported Cases (%)	Incidence* (per 100,000)
Bristol	1 (2)	2.0
Kent	6 (11)	3.6
Newport	5 (10)	5.9
Providence	27 (52)	4.3
Washington	13 (25)	10.5
<b>Total</b>	<b>52 (100)</b>	<b>5.0</b>

\* Rates are based on 2000 Rhode Island population estimates obtained from the U.S. Bureau of the Census

## Pertussis Vaccination status in Reported Cases of Pertussis in Children up to 19 years of age, 2005\*

Age	Unknown	0-2 Doses	3+ Doses
< 6 mos	0	5	N/A
6-11 mos	0	0	1
1-4 yrs	0	1	0
5-9 yrs	0	1	6
10-19 yrs	7	0	14

\*Of the 52 reported cases, 35 (67%) were aged birth to 19 years. Vaccination status of adults ages 20+ were not reported.

## Reported Cases and Incidence, 2001-2005

Year	Reported Cases	Incidence* (per 100,000)
2001	9	0.9
2002	22	2.1
2003	55	5.2
2004	53	5.1
2005	52	5.0

\* Rates are based on 2000 Rhode Island population estimates obtained from the U.S. Bureau of the Census

## Reporting Pertussis

Report pertussis to the Rhode Island Department of Health Immunization Program at (401) 222-2312. For more information about pertussis see:

<http://www.health.state.ri.us/topics/pertussis.php>